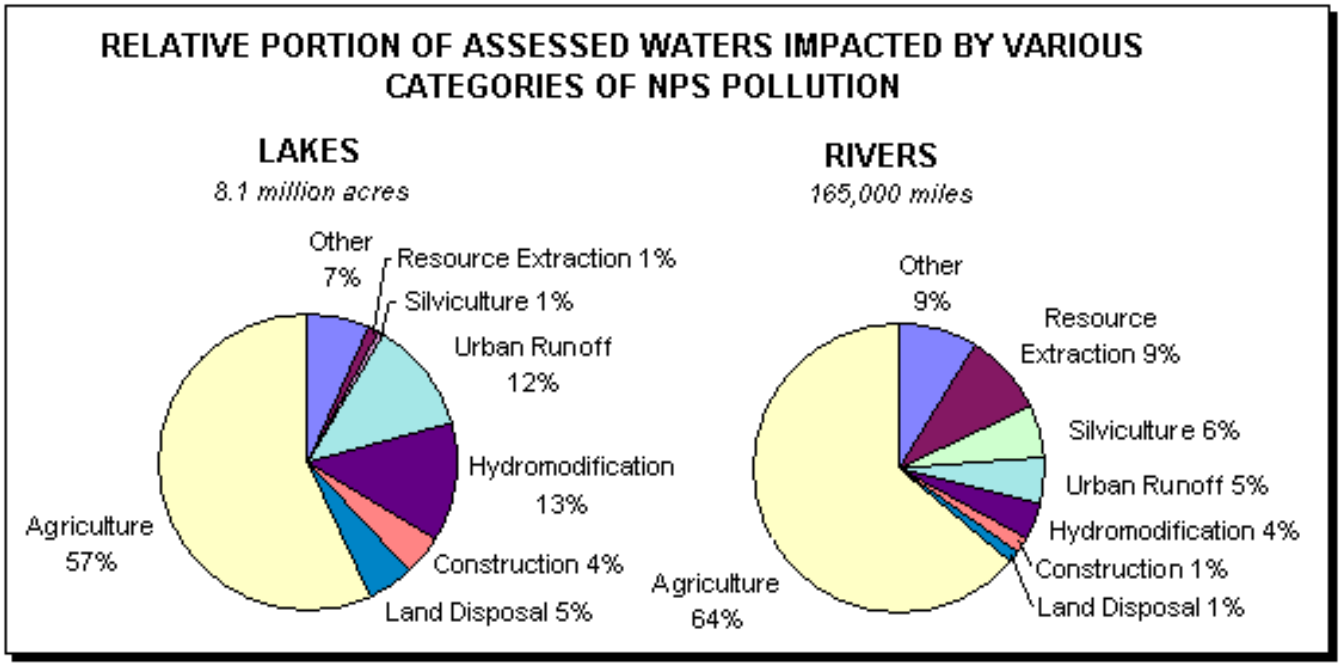
Streamside forests are complex ecosystems vital to the protection of our streams and rivers

Streamside forests are crucial to the protection and enhancement of the water resources of the Eastern United States. They are extremely complex ecosystems that help provide optimum food and habitat for stream communities as well as being useful in mitigating or controlling nonpoint source pollution (NPS). Used as a component of an integrated management system including nutrient management and sediment and erosion control practices, streamside forests can produce a number of beneficial effects on the quality of water resources. Streamside forests can be effective in removing excess nutrients and sediment from surface runoff and shallow groundwater and in shading streams to optimize light and temperature conditions for aquatic plants and animals. Streamside forests also ameliorate the effects of some pesticides, and directly provide dissolved and particulate organic food needed to maintain high biological productivity and diversity in the adjoining stream.

Photo right: *Deforestation associated with agricultural expansion has left our waters vulnerable to pollution from animal waste and fertilizer.*

Streamside forests are crucial to water resource protection.

Forested watersheds are the generally accepted benchmark of quality for water resources.



Reference: 1985. America's Clean Water: The State's Evaluation of Progress.

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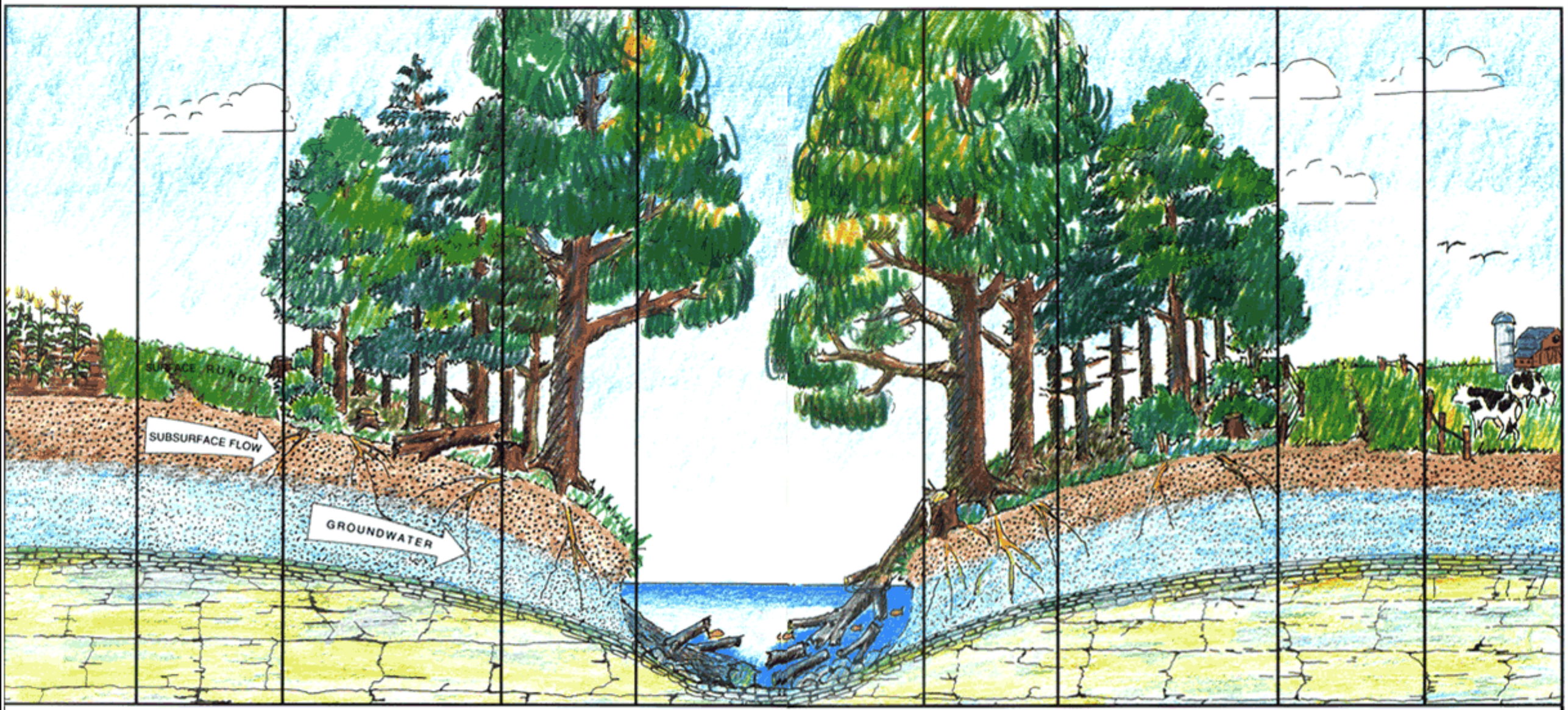
THE STREAMSIDE FOREST BUFFER



20'	60'	15'		15'	60'	20'	
CROPLAND	**ZONE 3 RUNOFF CONTROL**	**ZONE 2 MANAGED FOREST**	**ZONE 1 UNDISTURBED FOREST**	**STREAM BOTTOM**	**ZONE 1 UNDISTURBED FOREST**	**ZONE 2 MANAGED FOREST**	**ZONE 3 RUNOFF CONTROL**	**PASTURE**
Sediment, fertilizer and pesticides are carefully managed.	Concentrated flows are converted to dispersed flows by water bars or spreaders, facilitating ground contact and infiltration.	Filtration, deposition, plant uptake, anaerobic denitrification and other natural processes remove sediment and nutrients from runoff and subsurface flows.	Maturing trees provide detritus to the stream and help maintain lower water temperature vital to fish habitat.	Debris dams hold detritus for processing by aquatic fauna and provide cover and cooling shade for fish and other stream dwellers.	Tree removal is generally not permitted in this zone.	Periodic harvesting is necessary in Zone 2 to remove nutrients sequestered in tree stems and branches and to maintain nutrient uptake through vigorous tree growth.	Controlled grazing or haying can be permitted in Zone 3 under certain conditions.	Watering facilities and livestock are kept out of the Riparian Zone insofar as practicable.